

THE 49 d 17
VALUATION
OF
ANNUITIES
UPON
LIVES;

DEDUCED

From the London Bills of
Mortality.

By JAMES HODGSON, F. R. S.
And Master of the ROYAL MATHEMATICAL SCHOOL.

LONDON:

Printed for J. HINTON, at the King's-Arms in St Paul's Church-Yard. 1747.
[Price Two Shillings.]

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THE
P R E F A C E.

IT is now some Years, since I undertook the Trouble of computing the following Tables, and the principal Motive that induced me to do it, was, that at that Time, the Tables most in Use, were founded upon the Bills of *Breslaw*.

At *Breslaw*, one Half of the People that are born, live till they are about 41 Years of Age; at *London*, one Half die before they arrive at the Age of 10 Years; which must necessarily make a considerable Alteration in the Chances of Life, as well as in the Value of the Annuities.

The Method of putting down the Ages of the several Classes of People that die within the Bills of Mortality (for which we are indebted to Mr *Valens Comyn*) has furnished us with ample Matter to found the Computations upon.

The

E H T

The easy Way of raising Money for publick Uses, by granting Annuities upon Lives, has met with so great Encouragement, that there is no Room to doubt, that it will be carried down to future Times.

The frequent Entails upon Estates by Wills, the granting of Leases upon the Lives of Persons of different Ages, and differently interwoven, have rendered a true Estimate of the Values of Lives, according to the present Circumstances of Times, of very great Consequence; and to this End, the utmost Care and Pains have been taken, to render the Tables true and exact; and if any Mistake may have happened (which is not impossible) in a Work that requires such a vast Number of Calculations, it is to be hoped, the candid Reader will pass a favourable Censure upon it.





THE
VALUATION
OF
Annuities upon Lives.

IT appears by the *London* Bills of Mortality, a Copy of which is annexed, that in the Years 1728, 1729, 1730, 1731, 1732, 1733, 1734, 1735, 1736, and 1737; that is, during the Space of ten successive Years there died 103,159 between the Birth and two Years of Age, 23,505 between two and five Years, 9,775 between five and ten Years; 8,242 between ten and twenty, 19,776 between twenty and thirty, 24,302 between thirty and forty, 23,989 between forty and fifty, 19,693 between fifty and sixty, 16,309 between sixty and seventy, 10,684 between seventy and eighty, 6,450 between eighty and ninety, 1,188 between ninety and one hundred, 113 of one hundred, 10 of one hundred and one, 11 of one hundred and two, 12 of one hundred and three,

A

three, 6 of one hundred and four, 9 of one hundred and five, 10 of one hundred and six, 1 of one hundred and seven, 3 of one hundred and eight, 1 of one hundred and ten, 1 of one hundred and twelve, 2 of one hundred and sixteen; in all 267,150. [For if we add the Number that died in every single Year at the same Age into one Sum, it will give the Number that died in the Space of ten Years at that Age.]

Now if we take one tenth Part of the Number that died at any Age in the ten successive Years, we shall have the Number that died at that Age in the mean Year; and consequently, taking them one Year with another, we shall find, that in one Year there died 10,316 under two Years of Age, 2,350 between two and five Years, 978 between five and ten, 824 between ten and twenty, 1978 between twenty and thirty, 2,430 between thirty and forty, 2,399 between forty and fifty, 1969 between fifty and sixty, 1631 between sixty and seventy, 1068 between seventy and eighty, 645 between eighty and ninety, 119 between ninety and one hundred, and about 8 of one hundred and upwards, in all 26,715; whence it appears, that out of every 1000 People that are born, 386 die under two Years of Age, for as 26,715, the Persons dying in one Year, is to 10,316, the Persons dying under two Years, so is 1000 to 386, and by the same Way of reasoning it will be found, that 88 die between the Ages of two and five, 36 between the Ages of five and ten, 31 between the Ages of ten and twenty, 74 between the Ages of twenty and thirty, 91 between the Ages of thirty and forty, 90 between the Ages of forty and fifty, 74 between the Ages of fifty and sixty,

61 between the Ages of sixty and seventy, 40 between the Ages of seventy and eighty, 24 between the Ages of eighty and ninety, and 5 between the Ages of ninety and one hundred, and consequently out of every 1000 that are born, there are but 614 living at the End of two Years; for if from 1000, the Number of People that are born, be taken 386, the Number of People that die under two Years of Age, the Remainder 614, shews how many are living at two Years of Age.

Again, if to 386, the Number of Persons dying under two Years, be added 88, the Number dying between two Years and five, the Sum 474, shews how many are dead at the End of five Years, and this Sum taken from 1000, the Number born at first, leaves 526, the Number of Persons living at the Age of 5 Years, &c.

Whence it appears, that out of every 1000 Persons that have been born in one Year, 290 have died in the first Year of their Age, that is, between the Birth and one Year old; 96 in the second Year, that is, between the Ages of 1 and 2 Years; 50 in the third Year, that is, between the Ages of 2 and 3 Years; 25 in the fourth Year, that is, between the Ages of 3 and 4 Years, &c. as in the following Table, where the 1st, 3^d, &c. Columns, shew the Ages, the 2^d, 4th, &c. the Number of Persons that have died in each Year.

Ages.

A Table shewing, out of every 1000 People that are born how many die each Year, from the Birth to 96 Years.

Ages.	Died.	Ages.	Died.	Ages.	Died.	Ages.	Died.	Ages.	Died.	Ages.	Died.
Birth	290	16	2	32	9	48	8	64	6	80	3
1	96	17	3	33	9	49	8	65	6	81	3
2	50	18	4	34	9	50	8	66	6	82	3
3	25	19	5	35	9	51	8	67	6	83	3
4	13	20	6	36	9	52	8	68	6	84	3
5	10	21	6	37	9	53	8	69	6	85	3
6	8	22	7	38	9	54	7	70	5	86	2
7	7	23	7	39	10	55	7	71	5	87	2
8	6	24	7	40	10	56	7	72	5	88	2
9	5	25	8	41	10	57	7	73	4	89	1
10	4	26	8	42	10	58	7	74	4	90	1
11	4	27	8	43	9	59	7	75	4	91	1
12	3	28	8	44	9	60	7	76	3	92	1
13	2	29	9	45	9	61	6	77	3	93	1
14	2	30	9	46	9	62	6	78	3	94	1
15	2	31	9	47	8	63	6	79	3	95	0
16		32		48		64		80	3	96	

of Annuities upon Lives.

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It likewise appears by the foregoing Computation, that out of every Thousand Persons that have been born in one Year, no more than 710 have lived to the Age of one Year, 614 to the Age of two Years, 564 to the Age of three Years, 539 to the Age of four Years, &c. as will appear by the following Table, in which the 1st, 3^d, &c. Columns shew the Ages, the 2^d, 4th, &c. the Number of Persons that lived to that Age.

<i>Ages.</i>	<i>Living.</i>	<i>Ages.</i>	<i>Living.</i>	<i>Ages.</i>	<i>Living.</i>	<i>Ages.</i>	<i>Living.</i>	<i>Ages.</i>	<i>Living.</i>	<i>Ages.</i>	<i>Living.</i>
Born	1000	16	473	32	367	48	220	64	105	80	29
1	710	17	471	33	358	49	212	65	99	81	26
2	614	18	468	34	349	50	204	66	93	82	23
3	564	19	464	35	340	51	196	67	87	83	20
4	539	20	459	36	331	52	188	68	81	84	17
5	526	21	453	37	322	53	180	69	75	85	14
6	516	22	447	38	313	54	172	70	69	86	12
7	508	23	440	39	304	55	165	71	64	87	10
8	501	24	433	40	294	56	158	72	59	88	8
9	495	25	426	41	284	57	151	73	54	89	6
10	490	26	418	42	274	58	144	74	49	90	5
11	486	27	410	43	264	59	137	75	45	91	4
12	482	28	402	44	255	60	130	76	41	92	3
13	479	29	394	45	246	61	123	77	38	93	2
14	477	30	385	46	237	62	117	78	35	94	1
15	475	31	376	47	228	63	111	79	32	95	0

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It

It appears by the preceding Table, that above half the Children that are born, die between the Birth and nine Years of Age; for out of 1000 that are born, there are but 495 living at the Age of nine Years, and that after they arrive at ten Years of Age, the Decrements of Life are little in Comparison with the former Years, and decrease regularly.

And in order to find the Chance or Degree of Probability, that a Person of any Age has to live to any other Age greater. From the Number of Persons living at the lesser Age, subtract the Number of Persons living at the greater Age, the Remainder shews the Number of Persons that have died during that Interval, by which, dividing the Number of Persons living at the greater Age, the Quotient will shew the Ratio of the Chance to Unity.

E X A M P L E.

Let it be required, to find the Chance or Degree of Probability, that a Person of 20 Years of Age has, to live till he be 47.

The Number of Persons living at 20 Years of Age are 459, the Number of Persons living at 47 Years of Age are 228, which taken from 459, the Number of Persons living at 20, the Remainder 231, are the Number of Persons that have died in that Interval, by which, therefore, dividing 228, the Number of Persons living at 47, the Quotient will be 0,99 or 1 nearly; consequently, the Chance that a Person of 20 Years of Age has to live till he be 47, is as 1 to 1, or an even Chance.

After

After the same Manner it will be found, that a Person of 10 Years of Age has an even Chance to live till he is about 45, and if he survives that Age, he has an even Chance to live till he is 61; and if he survives that Age, he has an even Chance to live till he is between 71 and 72; and if he again survives that Age, he has an even Chance to live till he is 80; and after that Period is over, he has an even Chance to live till he is between 84 and 85; and after that, till he is between 88 and 89; and after that, till he is between 91 and 92.

The Person of 20 Years, who has been shewn to have an even Chance to live till he is 47; if he survives that Age, he has an even Chance to live till he is between 62 and 63; and if he survives that Age, he has an even Chance to live till he is 80; and if he again survives that Age, he has an even Chance to live till he is 85; and if he again survives that Time, he has an even Chance to live till he is between 88 and 89; and after that, he has an even Chance to live till he is 91.

A Person of 30 Years of Age, has an even Chance to live till he is between 51 and 52; and if he survives that, he has an even Chance to live till he is between 66 and 67; and if he survives that Age, he has the same Chance to live till he is between 74 and 75; and if he survives that Age, he has the same Chance to live to 82; and after that, till between 86 and 87; and if he survives that, till 89; and if he survives that Age, till he is 92.

A Person of 40 Years of Age, has an even Chance to live till he is between 57 and 58; if he survives that Age, he has an even Chance to live till he is between

68 and 69; if he survives that Age, he has the same Chance to live till between 77 and 78; and if he outlives that Time, he has the same Chance to live till between 83 and 84; after that, till he is 87; and if he outlives that Time, till he is 90.

A Person of 50 Years of Age, has an even Chance to live till he is between 64 and 65; and if he survives that Time, he has an even Chance to live till between 73 and 74; and after that, he has the same Chance to live till between 81 and 82; and after that Time, he has the same Chance to live till between 85 and 86; after that till 89; and if he outlives that Time, he has the same Chance to live till 92.

A Person of 60 Years, has an even Chance to live till he is 71; and if he survives that Time, he has an even Chance to live till he is 79; if he survives that Time, he has the same Chance to live till between 84 and 85; and after that Period, he has the same Chance to live to 88; after that to 91; and if he outlives that Time, he has the same Chance to live to 93.

A Person of 70 Years of Age, has an even Chance to live till between 78 and 79; and if he survives that Age, he has the same Chance to live to 84; if he again survives that Time, he has the same Chance to live till he is between 87 and 88; and after that, till between 90 and 91; and if he outlives that Time, he has an even Chance to live to 93.

A Person of 80 Years, has an even Chance to live till 85; and if he outlives that Time, he has the same Chance to live to 88; and after that Period, till 91; and if he outlives that Time, he has an even Chance to live to 93.

A Person

A Person of 90 Years, has an even Chance to live to 93; and if he outlives that Time, to 94.

By the same Method of Computation it will be found, that it is 2.45 to 1 that a Child lives from the Birth to one Year old; 1.62 to 1 that it lives to two Years of Age; 1.11 to 1 that it lives to five Years of Age; 1.04 to 1 that it doth not live to ten Years old; 1.18 to 1 that it doth not live to twenty; 1.65 to 1 that it does not live to thirty; 2.38 to 1 that it does not live to forty; 3.85 to 1 that it does not live to fifty; 6.66 to 1 that it does not live to sixty; 14.28 to 1 that it does not live to seventy; 33.33 to 1 that it does not live to eighty; 142.85 to 1 that it does not live to ninety; 3381 to 1 that it does not live to one hundred Years of Age, and upwards.

It is 5.98 to 1 that a Child of two Years of Age lives to five; it is 3.95 to 1 that it lives to ten; it is 2.96 to 1 that it lives to twenty; it is 1.68 to 1 that it lives to thirty; it is 1.09 to 1 that it does not live to forty; 2.01 to 1 that it does not live to fifty; 3.45 to 1 that it does not live to sixty; 5.55 to 1 that it does not live to seventy; 20 to 1 that it does not live to eighty; 125 to 1 that it does not live to ninety; and it is 2074.6 to 1 that it doth not live to 100, and upwards.

It is 14.81 to 1 that a Person of 10 Years lives to 20; it is 3.66 to 1 that he lives to 30; it is 15 to 1 that he lives to 40; it is 1.41 to 1 that he does not live to 50; it is 2.77 to 1 he does not live to 60; it is 6.25 to 1 he does not live to 70; it is 16.66 to 1 he does not live to 80; it is 100 to 1 he does not live to 90; and it is 1652.9 to 1 he does not live to 100, and upwards.

It is 5.2 to 1 that a Person of 20 Years of Age lives to 30; it is 1.78 to 1 he lives to 40; it is 1.25 to 1 that he doth not live to 50; it is 2.5 to 1 that he does not live to 60; it is 6.25 to 1 that he does not live to 70; it is 14.92 to 1 he does not live to 80; it is 90.91 to 1 that he does not live to 90 Years; and it is 1550.4 to 1 he does not live to 100, and upwards.

It is 3.22 to 1, that a Person of 30 Years of Age lives till he is 40; it is 1.13 to 1 that he lives to 50; it is 1.69 to 1 that he does not live to 60; it is 5.38 to 1 he doth not live to 70; it is 12.34 to 1 he does not live to 80; it is 77 to 1 he does not live to 90; and it is 1298.7 to 1 he does not live to 100, and upwards.

It is 2.26 to 1 that a Person of 40 Years old lives to 50; it is 1.26 to 1 he does not live to 60; it is 3.25 to 1 he does not live to 70; it is 9.18 to 1 he does not live to 80; it is 59 to 1 he does not live to 90; and it is 992 to 1 he does not live to 100, and upwards.

It is 1.74 to 1 that a Person of 50 Years old lives to 60; it is 1.95 to 1 he does not live to 70; it is 6.02 to 1 he does not live to 80; it is 33 to 1 he does not live to 90; and it is 694.4 to 1 he does does not live to 100, and upwards.

It is 1.12 to 1 that a Person of 60 Years old lives to 70; it is 8.47 to 1 he does not live to 80; it is 25 to 1 he does not live to 90; and it is 438.6 to 1 he does not live to 100, and upwards.

It is 1.43 to 1 that a Person of 70 Years old does not live to 80; it is 12.5 to 1 he does not live to 90; and it is 232 to 1 he does not live to 100, and upwards.

It

It is 4.85 to 1 that a Person of 80 Years old does not live to 90; and it is 97 to 1 he does not live to 100, and upwards.

It is 15 to 1 a Person of 90 Years old does not live to 100, and upwards.

Hence, the Value of an Annuity upon a single Life, of a given Age, or the Value of any limited Time the Person has a Probability of living, at any Rate of Interest, may be found.

E X A M P L E.

Let it be required, to find the Value of an Annuity of one Pound, for the Life of a Person of ten Years of Age, at the Rate of 3 *per Cent, per Annum.*

The present Value of one Pound, payable at the End of one Year, Discount being allowed, at 3 *per Cent. per Annum*, is .9709 = 19s. 5d. and this is the Sum the Purchaser ought to pay, to receive one Pound at the Years End; but as the Probability of living from 10 Years old to 11, is as 486 to 490, or as 121.5 to 1; since out of 490 Persons living at the Age of 10, there are but 486 living at the Age of 11; this Value .9709 must be diminished in the Proportion of 121.5 to 1, *viz.* .0079 this therefore taken from .9709 the Value before found, leaves .9630 for the Value of the Life at the End of the 11th Year; or if we multiply .9709 the present Value of 1*l.* by 486, the Number of Persons living at 11 Years of Age, and divide the Product by 490, the Number of Persons living at 10 Years of Age, the Quotient will be .9630, the same Value as before investigated.

Again;

Again; the present Value of 1 *l.* payable at the End of two Years (Discount being allowed at 3 *per Cent. per Annum*) is .9426, which multiplied by 482, the Number of Persons living at 12 Years old, and dividing the Product by 490, the Number of Persons living at 10 Years of Age, the Quotient will be .9272 the Value of a Life of 10 Years old from 11 to 12 Years of Age; and this being added to .9630 the Value at the End of the 11th Year, the Sum will be the Value of the Life, from 10 to 12 Years of Age.

Again; the present Value of 1 *l.* payable at the End of 3 Years (Discount being allowed at 3 *per Cent. per Annum*) is .9151, which multiplied by 479, the Number of Persons living at the Age of 13, and the Product divided by 490, the Number of Persons living at the Age of 10 Years, will give .8945 the Value of a Life of 10 Years old, from 12 to 13 Years of Age, and this being added to 1.8902 the Value of the Life at the End of the 12th Year, will give 2.7847, for the Value of the Life from 10 Years of Age to the End of the 13th Year; and by repeating these Operations to the utmost Extent of Life, the Value of 1 *l. per Annum*, for a Life of 10 Years old, will be found to be £. 20, 16, 46. or 20.1646 Years Purchase; and after this Manner were the following Tables constructed, which shews the Value of a single Life from 1 to 90 Years of Age, at the Rate of 3, 4, and 5 *per Cent. per Annum*, which Tables are the Result of not a few Thousands Computations.

The Value of Annuities upon Lives, at the Rate of
3 per Cent. per Annum.

Ages.	Years Value.	Ages.	Years Value.	Ages.	Years Value.	Ages.	Years Value.
1	15.3092	24	15.5185	47	11.4286	70	6.9102
2	17.6004	25	15.2797	48	11.2391	71	6.6986
3	19.0145	26	15.0755	49	11.0526	72	6.5092
4	19.6644	27	14.8688	50	10.8713	73	6.3508
5	19.8524	28	14.6580	51	10.6884	74	6.2355
6	19.9220	29	14.4409	52	10.5125	75	6.0168
7	19.9062	30	14.2624	53	10.3443	76	5.8251
8	19.8460	31	14.0708	54	10.1853	77	5.4898
9	19.7372	32	13.8883	55	9.9642	78	5.1596
10	19.5761	33	13.7040	56	9.7493	79	4.8283
11	19.3183	34	13.5190	57	9.5379	80	4.5023
12	19.0618	35	13.3320	58	9.3317	81	4.1861
13	18.7800	36	13.1432	59	9.1338	82	3.8867
14	18.4877	37	12.9547	60	8.9473	83	3.6168
15	18.1708	38	12.7645	61	8.7721	84	3.3980
16	17.8023	39	12.5734	62	8.5251	85	3.2666
17	17.4262	40	12.4328	63	8.2829	86	2.9354
18	17.0818	41	12.2888	64	8.0458	87	2.6393
19	16.7682	42	12.1719	65	7.8154	88	2.3994
20	16.4856	43	12.0637	66	7.5963	89	2.1378
21	16.2359	44	11.9113	67	7.3907	90	1.8772
22	15.9775	45	11.7651	68	7.2031		
23	15.7532	46	11.6468	69	7.0395		

*The Value of Annuities upon Lives, at the Rate of
4 per Cent per Annum.*

<i>Ages.</i>	<i>Years Value.</i>	<i>Ages.</i>	<i>Years Value.</i>	<i>Ages.</i>	<i>Years Value.</i>	<i>Ages.</i>	<i>Years Value.</i>
1	13.9428	24	14.1129	47	10.6777	70	6.6315
2	15.7678	25	13.9187	48	10.5133	71	6.4356
3	16.8523	26	13.7520	49	10.3504	72	6.2603
4	17.3394	27	13.5831	50	10.1920	73	6.1136
5	17.4788	28	13.4094	51	10.0323	74	6.0069
6	17.5303	29	13.2305	52	9.8776	75	5.8025
7	17.5187	30	13.0828	53	9.7293	76	5.6233
8	17.4741	31	12.9233	54	9.5891	77	5.3100
9	17.3934	32	12.7715	55	9.3941	78	4.9990
10	17.2738	33	12.6177	56	9.2028	79	4.6864
11	17.0809	34	12.4622	57	9.0146	80	4.3781
12	16.8880	35	12.3051	58	8.8310	81	4.0768
13	16.6751	36	12.1463	59	8.6537	82	3.7915
14	16.4522	37	11.9836	60	8.4860	83	3.5335
15	16.2093	38	11.8250	61	8.3285	84	3.3229
16	15.9249	39	11.6628	62	8.1063	85	3.1965
17	15.6323	40	11.5424	63	7.8864	86	2.8778
18	15.3619	41	11.4191	64	7.6711	87	2.5912
19	15.1143	42	11.3189	65	7.4620	88	2.3582
20	14.8901	43	11.2262	66	7.2614	89	2.1041
21	14.6908	44	11.0954	67	7.0729	90	1.8506
22	14.4836	45	10.9689	68	6.9009		
23	14.3026	46	10.8665	69	6.7510		

*The Value of Annuities upon Lives at the Rate of
5 per Cent. per Annum.*

<i>Ages.</i>	<i>Years Value.</i>	<i>Ages.</i>	<i>Years Value.</i>	<i>Ages.</i>	<i>Years Value.</i>	<i>Ages.</i>	<i>Years Value.</i>
1	12.7505	24	12.8890	47	9.9979	70	6.3693
2	14.2075	25	12.7308	48	9.8551	71	6.1878
3	15.0414	26	12.5945	49	9.7126	72	6.0255
4	15.4077	27	12.4562	50	9.5741	73	5.8897
5	15.5113	28	12.3128	51	9.4344	74	5.7909
6	15.5496	29	12.1651	52	9.2982	75	5.5997
7	15.5409	30	12.0427	53	9.1673	76	5.4321
8	15.5078	31	11.9097	54	9.0434	77	5.1391
9	15.4478	32	11.7831	55	8.8712	78	4.8461
10	15.3588	33	11.6546	56	8.7007	79	4.5509
11	15.2140	34	11.5237	57	8.5329	80	4.2592
12	15.0685	35	11.3914	58	8.3692	81	3.9720
13	14.9072	36	11.2576	59	8.2102	82	3.7000
14	14.7368	37	11.1216	60	8.0593	83	3.4532
15	14.5501	38	10.9845	61	7.9175	84	3.2505
16	14.3301	39	10.8467	62	7.7175	85	3.1288
17	14.1019	40	10.7435	63	7.5177	86	2.8220
18	13.8891	41	10.6377	64	7.3221	87	2.5445
19	13.6932	42	10.5517	65	7.1320	88	2.3181
20	13.5150	43	10.4722	66	6.9482	89	2.0712
21	13.3551	44	10.3598	67	6.7753	90	1.8246
22	13.1890	45	10.2502	68	6.6175		
23	13.0427	46	10.1615	69	6.4798		

By

By the Help of the preceding Tables, may the Value of the Life of a Person of any Age between one and ninety Years, at the Rate of 3, 4, or 5 *per Cent. per Annum*, be had, by Inspection.

E X A M P L E.

Let it be required, to find the Value of the Life of a Person of 10 Years of Age, at the Rate of 3 *per Cent. per Annum*.

Entering the Table intituled, *Value of Annuities upon Lives, at the Rate of 3 per Cent. per Annum*, in the Column intituled *Ages*, find out the given Age, and right against it in the next Column, intituled *Years Value*, you will find 19.5761, which shews the Life of a Person of 10 Years of Age, is worth 19 Years, and .5761 Part of a Year's Purchase.

Entering again the Table intituled, *Value of Annuities upon Lives at the Rate of 4 per Cent. per Annum*, right against the given Age in the Column of *Ages*, you will find in the Column intituled *Years Value*, 17.2738, which shews, that the Life of a Person of 10 Years of Age, at the Rate of 4 *per Cent.* is worth 17 Years, and .2738 Part of a Year's Purchase.

Entering again the Table intituled, *Value of Annuities upon Lives at 5 per Cent. per Annum*, you will find against 10 the given Age, in the Column of *Ages*, stands 15.3588 in the Column intituled *Years Value*, which shews that the Life of Persons of 10 Years of Age, at the Rate of 5 *per Cent. per Annum*, is worth 15 Years, and .3588 Part of a Year's Purchase.

After

After the same Manner it would be found, that the Life of a Person of 20 Years of Age, at the Rate of 3 *per Cent. per Annum*, is worth 16.4856 Years Purchase; that the same Life, at the Rate of 4 *per Cent. per Annum*, is 14.8901 Years Purchase; and that, at the Rate of 5 *per Cent. per Annum*, it is worth but 13.5150 Years Purchase.

Again; it appears by the same Tables, that the Life of a Person of 30 Years of Age, at the Rate of 3 *per Cent. per Annum*, is worth 14.2624 Years Purchase; that, at the Rate of 4 *per Cent. per Annum*, it is worth 13.0828 Years Purchase; and that the same Life, at the Rate of 5 *per Cent. per Annum*, is worth but 12.0427 Years Purchase.

And hence all the various Cases relating to the Value of single Lives, from one to ninety Years of Age, at the Rate of 3, 4, or 5 *per Cent. per Annum*, may be easily solved.

C A S E I.

Having the Annuity, Age of the Person, and the Rate of Interest, to find the Value of the Annuity.

E X A M P L E.

Let it be required, to find the Value of an Annuity of 100*l.* upon the Life of a Person of 10 Years of Age, Money being valued at 3 *per Cent. per Annum*.

In the Table intituled, *Value of Annuities upon Lives at the Rate of 3 per Cent. per Annum*, right against 10
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the given Age, in the Column of *Ages*, I find in the Column intituled *Years Value*, 19.5761, which shews that it is worth 19.5761 Years Purchase, this therefore being multiplied by 100, the given Annuity, the Product is 1957.61 *l.* or 1957 *l.* 12 *s.* 2 *d.* $\frac{1}{2}$. for the Value sought.

Again; let it be required to find the Value of the same Annuity, for the same Life, Money being valued at 4 *per Cent. per Annum.*

Entering the Table intituled, *Value of Annuities upon Lives at the Rate of 4 per Cent. per Annum*, right against 10 the given Age, in the Column of *Ages*, I find in the Column intituled *Years Value*, 17.2738, which shews that it is worth 17.2738 Years Purchase; this Value therefore being multiplied by 100, the given Annuity, the Product is £. 1727.38 or 1727 *l.* 7 *s.* 7 *d.* for the Value sought.

Again; let it be required to find the Value of the same Annuity, for the same Age, Money being valued at 5 *per Cent. per Annum.*

Entering, as before, the Table intituled, *Value of Annuities upon Lives at the Rate of 5 per Cent. per Annum*, right against 10, the given Age, in the Column of *Ages*, I find in the Column intituled *Years Value*, 15.3588 Years Purchase; this Value, therefore, being multiplied by 100, the given Annuity, the Product is £. 1535.88 equal to 1535 *l.* 17 *s.* 7 *d.* for the Value sought.

And after the same Manner, the Value of an Annuity of 100 *l.* for the Life of a Person of 20 Years of Age, at the Rate of 3 *per Cent. per Annum*, will be found to be worth 1648 *l.* 11 *s.* 3 *d.* $\frac{1}{2}$. at the Rate of 4 *per Cent.*
per

per Annum, 1489*l.* 0*s.* 3*d.* $\frac{1}{2}$. and at the Rate of 5 per Cent. per Annum, it will be found to be worth but 1351*l.* 10*s.* 1*d.*

The Value of the same Annuity of 100*l.* for the Life of a Person of 30 Years of Age, at the Rate of 3 per Cent. per Annum, will be found to be worth 1426*l.* 4*s.* 9*d.* $\frac{1}{2}$. at the Rate of 4 per Cent. per Annum, 1308*l.* 5*s.* 7*d.* $\frac{1}{2}$. and at the Rate of 5 per Cent. per Annum, it will be found to be worth but 1204*l.* 5*s.* 6*d.*

C A S E II.

Having the Value of an Annuity, the Age of the Person, and the Rate of Interest, to find the Annuity.

E X A M P L E.

Let it be required, to find what Annuity a Person of 10 Years of Age can Purchase with 1000*l.* Money being valued at 3, 4, and 5 per Cent. per Annum.

Entering the Table intituled, *Value of Annuities upon Lives at the Rate of 3 per Cent. per Annum*, I find in the Column intituled *Years Value*, against 10 the given Age, in the Column intituled *Ages*, 19.5761, by which, dividing 1000*l.* the Value of the Purchase, the Quotient is £. 51.0827 equal to 51*l.* 1*s.* 8*d.* for the Annuity sought at the Rate of 3 per Cent. per Annum.

Again; entering the Table intituled, *Value of Annuities upon Lives at the Rate of 4 per Cent. per Annum*, against 10 the given Age, I find in the Column intituled *Years Value*, 17.2738 by which, dividing 1000*l.* the

the Purchase-Money, the Quotient is £. 57.8911 equal to 57 *l.* 17 *s.* 10 *d.* for the Annuity sought, Money being valued at 4 *per Cent. per Annum.*

Again; entering the Table intituled, *Value of Annuities upon Lives at the Rate of 5 per Cent. per Annum*, right against 10, the given Age, in the Column of *Ages*, I find, in the Column intituled *Years Value*, 15.3588, by which, dividing 1000 *l.* the Purchase-Money, the Quotient is 65.1092 equal to 65 *l.* 2 *s.* 2 *d.* $\frac{1}{4}$. for the Annuity, when Money is valued at 5 *per Cent. per Annum.*

Hence it appears, that 1000 *l.* will purchase an Annuity of 51 *l.* 1 *s.* 8 *d.* when Money is valued at 3 *per Cent. per Annum*; of 57 *l.* 17 *s.* 10 *d.* when Money is valued at 4 *per Cent. per Annum*; and of 65 *l.* 2 *s.* 2 *d.* $\frac{1}{4}$. when Money is valued at 5 *per Cent. per Cent.*

C A S E III.

Having the Annuity, it's Value, and the Rate of Interest, to find the Age of the Person.

E X A M P L E.

Let it be required, to find the Age of the Person, for whose Life an Annuity of 70 *l.* is worth 1000 *l.* when the Value of Money is 3, 4, or 5 *per Cent. per Annum.*

Divide 1000 *l.* the present Worth, by 70 *l.* the Annuity, the Quotient is 14.2857: Then

In

In the Table intituled, *The Value of Annuities upon Lives at the Rate of 3 per Cent. per Annum*, in the Column intituled *Years Value*, I find the next less and great Numbers to the Quotient, viz. 14.2624 the next less Number to it against 30 Years, and the next greater, viz. 14.4409 against 29 Years, which shews that the Age of the Person must be between 29 and 30 Years, and by making a proportional Allowance for .1534, the Difference between 14.4409 the Value of a Life of 29 Years, and 14.2875 the Quotient, we shall find that the Age sought is 29.8594 Years, equal to 29 Years and 10 Months nearly.

Again; entering the Table intituled, *The Value of Annuities upon Lives at the Rate of 4 per Cent.* you will find in the Column intituled *Years Value*, that the next greater Number to the Quotient 14.2857, is 14.3026, which stands against 23 Years of Age, and that the next less Number to the Quotient 14.2857, is 14.1129, which stands against 24 Years of Age, and by making a proportionable Allowance for .0169, the Excess of 14.3026, above 14.2857 the Quotient, you will find that the true Age of the Person is 23.0796 Years, or 23 Years nearly.

Again; entering the Table intituled, *The Value of Annuities upon Lives at the Rate of 5 per Cent.* you will find in the Column intituled *Years Value*, that the next greater Number to the Quotient 14.2857, is 14.3301, which stands against 16 Years, and that the next less Number to the Quotient 14.2857, is 14.1019, which stands against 17 Years; and by making a proportionable Allowance for .0444, the Excess of

the Number 14.3301, above the Quotient 14.2857, you will find that the Age of the Person is 16.1866 Years, or 16 Years 2 Months nearly.

Whence it appears, that 1000*l.* will purchase an Annuity of 70*l.* *per Annum*, for a Life of 29 Years 10 Months, when Money is valued at 3 *per Cent. per Annum*, that the same Sum will purchase an Annuity for a Life of 23 Years, when Money is valued at 4 *per Cent. per Annum*, and that the same Sum will purchase the same Annuity, for a Life of 16 Years 2 Months, when Money is valued at 5 *per Cent.*

It is remarkable, that the highest Value of a Life, is when the Person is about 6 Years of Age, and that from the Birth to that Time, the Value of Lives decrease, as they do from that Time to the utmost Extremity of old Age; that a Life of 1 Year old, is nearly equal in Value to a Life of 25 Years old; that a Life of two Years old, is nearly equal in Value to a Life of 77 old; that a Life of 3 Years old, is nearly equal in Value to a Life of 12 Years old; that a Life of 4 Years old, is nearly equal in Value to a Life between 9 and 10 Years; and that a Life of 5 Years, is nearly equal in Value to a Life of 7 Years of Age; and hence arose the Custom, of putting the Value of the Lives of Minors, upon the same Value with those of a middling Age, which, at the best, is but a bold Guess, and made use of for no better Reason, than that they knew of no better Way to find the true Value.

C A S E IV.

The Annuity, it's Value, and the Age of the Person being given, to find the Rate of Interest.

E X A M P L E.

Suppose a Person of 20 Years of Age, gives 1025 *l.* for an Annuity of 60 *l.* *per Annum*, What Interest is allowed the Purchaser?

Divide 1025 *l.* the Purchase-Money, by 60 *l.* the Annuity, and the Quotient 17.0750 thence resulting, will give the Number of Years Purchase.

In the Tables intituled, *The Value of Annuities upon Lives at the Rate of 3, 4, and 5 per Annum*, in the Column intituled *Years Value*, against 20 the given Age, seek for the nearest Number of Years to 17.0750, the Quotient before found, and you will find in the Table intituled *The Value, &c. at the Rate of 3 per Cent. per Annum*, that the Value of a Life of 18 Years, at that Rate, is 17.0856, agreeing very nearly with the Value given for the Annuity, whence it follows, that the Purchaser is allowed Interest, at the Rate of 3 *per Cent. per Annum*.

Again; suppose the same Person of 20 Years of Age, gives but 890 *l.* for the same Annuity of 60 *l.* *per Annum*, and it be required to find what Interest he is allowed for his Money.

By dividing 890 *l.* the Purchase-Money, by 60 *l.* the given Annuity, the Quotient 14.8333 will shew the Number of Years Purchase given for the Annuity now:

Entering

Entering the Tables shewing the *Value of Annuities*, &c. you will find that the Value of an Annuity, for a Person of 20 Years of Age, at 4 *per Cent.* is worth 14.8091 Years Purchase, which agreeing very nearly with the Value given by the Purchaser, shews that he is allowed at the Rate of 4 *per Cent.* nearly.

Again; suppose the same Person of 20 Years of Age, gives but 820*l.* for the same Annuity of 60*l.* *per Annum*, and it be required to find what Interest he is allowed for his Money.

Divide 820*l.* the Purchase-Money, by the Annuity 60*l.* the Quotient will give 13.6666 the Years Value paid for it; now in the Table intituled *Value of Annuities*, &c. at 4 *per Cent.* I find that the Value of a Life of 20 Years of Age, is worth 14.8901 Years Purchase; and entering the 5 *per Cent.* Table, I find the Value of the same Life to be but 13.5150 Years Purchase, whence it appears, that the Purchaser is allowed more than 4 *per Cent.* and less than 5, and by making a proportionable Allowance for the 1.2235, the Excess of 14.8901 Years, the Value of the Life at 4 *per Cent.* above 13.6666 Years, the Purchase given, it will be found that the Purchaser is allowed at the Rate of 4*l.* 19*s.* 1*d.*

Again; suppose a Man of 60 Years of Age, received an Annuity of 12 *per Cent.* of the Purchase-Money, and it be required to find what Interest he is allowed for his Money.

By dividing 100*l.* by 12, the Annuity, the Quotient thence resulting, will be 8.3333, with which entering the Tables shewing *The Value*, &c. it will be found that

that a Life of 60 Years of Age, at 4 *per Cent. per Annum*, is worth 8.4860 Years Purchase; whence it appears, that the Interest he is allowed, is above 4 *per Cent. per Annum*, and by making a proportionable Allowance for the Excess of 8.4860, the Tabular Years Value, above 8.3333 Years Value in the present Case, it will be found that the Interest allowed is 4*l.* 5*s.* *per Cent. per Annum*.

Money being valued at 3 *per Cent. per Annum*, a Person of 10 Years of Age, ought to have an Annuity of 5*l.* 2*s.* 2*d.* *per Cent.* of the Purchase-Money; if Money be valued at 4 *per Cent. per Annum*, he ought to receive 5*l.* 15*s.* 9*d.* *per Cent. per Annum*, of the Purchase-Money; and if Money be valued at 5 *per Cent. per Annum*, he ought to receive 6*l.* 10*s.* 3*d.* *per Cent. per Annum*, of the Purchase-Money, as will appear by the following Tables, which shew how much *per Cent. per Annum*, of the Purchase-Money, a Person of any Age from one to ninety Years of Age, ought to receive, Money being valued at the Rate of 3, 4, and 5 *per Cent. per Annum*, Interest.

[illegible]

The VALUATION

*Annuities to be paid according to the Age of the Annuitant,
from 1 Year old to 90, for every 100l. Purchase-
Money, at the Rate of 3 Pound per Cent. per
Annum.*

Ages.	Annuities.			Ages.	Annuities			Ages.	Annuities.			Ages.	Annuities.		
	l.	s.	d.		l.	s.	d.		l.	s.	d.		l.	s.	d.
1	6	10	8	24	6	8	11	47	8	15	0	70	14	8	2
2	5	13	8	25	6	10	11	48	8	17	11	71	14	10	7
3	5	5	2	26	6	12	8	49	9	0	11	72	15	7	3
4	5	1	8	27	6	14	6	50	9	4	0	73	15	14	11
5	5	0	9	28	6	16	5	51	9	7	1	74	16	0	9
6	5	0	5	29	6	18	6	52	9	10	3	75	16	12	5
7	5	0	6	30	7	0	3	53	9	13	4	76	17	3	4
8	5	0	9	31	7	2	1	54	9	16	4	77	18	4	4
9	5	1	4	32	7	4	0	55	10	0	1	78	19	7	7
10	5	2	2	33	7	5	11	56	10	5	2	79	20	14	2
11	5	3	6	34	7	7	11	57	10	9	8	80	22	4	3
12	5	3	10	35	7	10	0	58	10	14	4	81	23	17	9
13	5	5	5	36	7	12	2	59	10	19	0	82	25	14	6
14	5	9	9	37	7	14	5	60	11	3	6	83	27	12	11
15	5	10	1	38	7	16	8	61	11	8	0	84	29	8	7
16	5	12	4	39	7	19	1	62	11	14	7	85	30	12	2
17	5	14	9	40	8	0	10	63	12	1	6	86	34	1	5
18	5	17	1	41	8	2	9	64	12	8	10	87	37	17	10
19	5	19	3	42	8	4	4	65	12	15	11	88	41	13	9
20	6	1	4	43	8	5	9	66	13	3	4	89	46	15	5
21	6	3	2	44	8	7	11	67	13	10	7	90	53	5	6
22	6	5	2	45	8	10	0	68	13	17	8				
23	6	6	11	46	8	11	9	69	14	4	1				

Annuities

Annuities to be paid according to the Age of the Annuitant, from 1 Year old to 90, for every 100l. Purchase-Money, at the Rate of 4 Pound per Cent. per Annum.

Ages.	Annuities.			Ages.	Annuities.			Ages.	Annuities.			Ages.	Annuities.		
	l.	s.	d.		l.	s.	d.		l.	s.	d.		l.	s.	d.
1	7	3	5	24	7	1	8	47	9	7	4	70	15	1	7
2	6	6	10	25	7	3	8	48	9	10	3	71	15	10	9
3	5	18	8	26	7	5	5	49	9	13	3	72	15	19	6
4	5	15	4	27	7	7	3	50	9	16	3	73	16	7	2
5	5	14	5	28	7	9	2	51	9	19	4	74	16	12	11
6	5	14	0	29	7	11	2	52	10	2	6	75	16	19	6
7	5	14	2	30	7	12	10	53	10	5	7	76	17	15	8
8	5	14	6	31	7	14	9	54	10	8	7	77	18	16	8
9	5	15	0	32	7	16	7	55	10	12	11	78	20	0	1
10	5	15	9	33	7	18	6	56	10	17	4	79	21	6	9
11	5	17	1	34	8	0	6	57	11	1	10	80	22	16	10
12	5	18	5	35	8	2	6	58	11	6	6	81	24	10	7
13	5	19	10	36	8	4	8	59	11	11	1	82	26	7	6
14	6	1	7	37	8	6	10	60	11	15	8	83	28	6	0
15	6	3	5	38	8	9	2	61	12	0	2	84	30	1	11
16	6	5	7	39	8	11	6	62	12	6	9	85	31	6	4
17	6	7	11	40	8	13	3	63	12	13	7	86	34	15	0
18	6	10	2	41	8	15	2	64	13	0	9	87	38	11	10
19	6	12	4	42	8	16	8	65	13	8	0	88	42	8	1
20	6	14	4	43	8	18	2	66	13	15	5	89	47	10	6
21	6	16	2	44	9	0	3	67	14	2	9	90	54	0	9
22	6	18	1	45	9	2	4	68	14	9	9				
23	6	19	10	46	9	4	0	69	14	16	3				

Annuities to be paid according to the Age of the Annuitant, from 1 Year old to 90, for every 100 l. Purchase-Money, at the Rate of 5 Pound, per Cent. per Annum.

Ages.	Annuities.			Ages.	Annuities.			Ages.	Annuities.			Ages.	Annuities.		
	l.	s.	d.		l.	s.	d.		l.	s.	d.		l.	s.	d.
1	7	16	10	24	7	15	2	47	10	0	0	70	15	14	0
2	7	0	9	25	7	17	2	48	10	2	1	71	16	3	2
3	6	12	11	26	7	18	8	49	10	5	11	72	16	11	11
4	6	9	9	27	8	0	7	50	10	8	10	73	16	19	7
5	6	8	11	28	8	2	5	51	10	12	0	74	17	5	4
6	6	8	7	29	8	4	5	52	10	15	1	75	17	17	2
7	6	8	8	30	8	6	1	53	10	18	2	76	18	8	2
8	6	8	11	31	8	7	10	54	11	1	2	77	19	9	2
9	6	9	6	32	8	9	9	55	11	5	5	78	20	12	8
10	6	10	3	33	8	11	7	56	11	9	10	79	21	19	6
11	6	11	6	34	8	13	6	57	11	14	5	80	23	9	7
12	6	12	9	35	8	15	7	58	11	19	0	81	25	3	6
13	6	14	2	36	8	17	8	59	12	3	7	82	27	0	6
14	6	15	8	37	8	19	10	60	12	8	2	83	28	19	2
15	6	17	6	38	9	2	1	61	12	12	8	84	30	15	2
16	6	19	6	39	9	4	5	62	12	19	1	85	31	19	2
17	7	1	10	40	9	6	2	63	13	6	0	86	35	8	9
18	7	4	0	41	9	8	0	64	13	13	2	87	39	5	10
19	7	6	1	42	9	9	6	65	14	0	5	88	43	2	10
20	7	8	0	43	9	11	0	66	14	7	10	89	48	8	9
21	7	9	9	44	9	13	0	67	14	15	3	90	54	16	1
22	7	11	8	45	9	15	1	68	15	2	2				
23	7	13	4	46	9	16	8	69	15	8	8				

By the Help of the preceding Table, may be seen by Inspection, what Annuity a Person ought to receive for every 100*l.* he lays out, at any Age, from 1 to 90 Years, at the Rate of 3, 4, and 5 *per Cent. per Annum.*

For by entering the 1st, or 3 *per Cent. per Annum* Table, it appears that a Person of 20 Years of Age, ought to receive 6*l.* 1*s.* 4*d.* *per Annum*, for every 100*l.* he is willing to lay out. Again; by entering the 2^d, or 4 *per Cent. per Annum* Table, he will find, that if Money be valued at 4 *per Cent. per Annum*, he ought to receive 6*l.* 14*s.* 4*d.* *per Annum.* And again; entering the 3^d, or 5 *per Cent. per Annum* Table, he will find, that he ought to receive 7*l.* 8*s.* *per Annum*, when Money is valued at 5 *per Cent. per Annum.*

It appears by the same Tables, that a Person of 40 Years, ought to receive an Annuity of 8*l.* 0*s.* 10*d.* when Money is valued at 3 *per Cent. per Annum*; but when Money is valued at 4 *per Cent.* he ought to receive 8*l.* 13*s.* 3*d.* *per Annum*; and if Money be valued at 5 *per Cent. per Annum*, he ought to receive 9*l.* 6*s.* 2*d.* *per Annum.*

A Person of 60 Years of Age, ought to receive 12*l.* 8*s.* 2*d.* *per Annum*, when Interest is at 5 *per Cent. per Annum*; 11*l.* 15*s.* 8*d.* when Interest is at 4 *per Cent. per Annum*; and 11*l.* 3*s.* 6*d.* when Interest is at 3 *per Cent. per Annum*; and hence it appears, what a hard Bargain the People have had, who lent Money to rebuild *Shoreditch* Church; since Persons of 60 Years of Age and upwards, have been allowed but 8*l.* *per Annum* for Life, for every 100*l.* sunk, which

is less than 2 *per Cent. per Annum*, Interest, whereas they ought to have given the same Annuity to Persons of 40 Years of Age, when Money is valued at 3 *per Cent. per Annum*; and to Persons of 34 Years of Age, when Money is valued at 4 *per Cent. per Annum*; and to Persons of 29 Years of Age, if Money be valued at 5 *per Cent. per Annum*.

Altho' the Tabular Annuities are limited to 100*l.* Purchase, yet by their Help, may the Annuity for any other Sum be readily found.

E X A M P L E.

Suppose a Person of 60 Years of Age, would lay out 500*l.* upon an Annuity for his Life, the Seller allowing him 3 *per Cent. per Annum*, what Sum must he receive *per Annum*.

Entering the 3 *per Cent. per Annum* Table, against 60 in the Column of *Ages*, I find 11*l.* 3*s.* 6*d.* in the Column of *Annuities*, which shews that the Purchaser ought to be allowed an Annuity of 11*l.* 3*s.* 6*d.* for each 100*l.* Therefore multiplying 11*l.* 3*s.* 6*d.* by 5, the Product is 55*l.* 17*s.* 6*d.* and so much must the Annuitant receive *per Annum*, for his 500*l.* Purchase-Money.

Again; suppose it were required, to find what Annuity he must receive for 600*l.* at the same Rate of Interest

Multiplying therefore 11*l.* 3*s.* 6*d.* the Annuity for 100*l.* by 6, the Product 67*l.* 1*s.* shews how much the Purchaser ought to be allowed *per Annum*,
for

for his 600*l*. Again; suppose it were required, to find what Annuity the Purchaser ought to receive for 625*l*. it has been found in the preceding Example, that for 600*l*. he ought to receive 67*l*. 1*s*. *per Annum*, now if to that Sum be added 2*l*. 15*s*. 10*d*. $\frac{1}{2}$. the fourth Part of 11*l*. 3*s*. 6*d*. the Annuity for 100*l*. (because 25, the Excess of 625*l*. above 600*l*. is a fourth Part of 100*l*) the Sum 69*l*. 16*s*. 10*d*. $\frac{1}{2}$. shews how much the Annuitant ought to receive *per Annum*, for his 625*l*. Purchase-Money.

After the same Manner it will be found, that for 650*l*. Purchase-Money, he ought to receive 72*l*. 12*s*. 9*d*. *per Annum*; for 675*l*. Purchase-Money, he ought to receive 75*l*. 8*s*. 7*d*. $\frac{1}{2}$. *per Annum*; for 700*l*. Purchase-Money, he ought to receive 79*l*. 4*s*. 6*d*. *per Annum*; and after the same Manner, may the Annuity for any Sum, at any Age between one and ninety, at the Rate of 3, 4, or 5 *per Cent. per Annum*, Interest, be readily found.

Annuities upon Lives, may be compared with Annuities for a certain limited Number of Years; thus the Value of an Annuity for a Life of 10 Years of Age, which is 15.3588 Years Purchase, at 5 *per Cent. per Annum*, is of the same Value nearly, with an Annuity certain for the Term of 30 Years, at the same Rate of Interest; the Value of a Life of 20 Years of Age, which is 13.5150 Years Purchase, is of the same Value nearly, with an Annuity certain for the Term of 23 Years; a Life of 38 Years of Age, which is worth 10.9845 Years Purchase, is nearly equal to the Value of an Annuity certain for a Term of

of 16 Years; and a Life of 60 Years, which is worth 8.0593 Years Purchase, is nearly of the same Value with an Annuity certain for a Term of 10 $\frac{1}{2}$ Years, all at the same Rate of 5 *per Cent. per Annum, Interest*; as will appear by the following Tables, which shew the Value of Annuities certain, from 1 to 100 Years, at the Rate of 3, 4, 5, 6, 7, and 8 *per Cent. per Annum, Interest*.

A Table shewing the Value of an Annuity certain, of one Pound per Annum, from 1 to 100 Years, at the Rate of 3 per Cent. per Annum.

Years	Value in Years, D. Pts.	Years	Value in Years, D. Pts.	Years	Value in Years, D. Pts.	Years	Value in Years, D. Pts.
1	0.9709	26	17.8768	51	25.9512	76	29.8076
2	1.9135	27	18.3270	52	26.1662	77	29.9103
3	2.8286	28	18.7641	53	26.3750	78	30.0100
4	3.7171	29	19.1885	54	26.5777	79	30.1068
5	4.5797	30	19.6004	55	26.7744	80	30.2008
6	5.4172	31	20.0004	56	26.9655	81	30.2920
7	6.2303	32	20.3888	57	27.1809	82	30.3806
8	7.0197	33	20.7658	58	27.3310	83	30.4666
9	7.7861	34	21.1318	59	27.5058	84	30.5501
10	8.5302	35	21.4872	60	27.6756	85	30.6312
11	9.2526	36	21.8323	61	27.8404	86	30.7099
12	9.9540	37	22.1672	62	28.0003	87	30.7863
13	10.6350	38	22.4925	63	28.1557	88	30.8605
14	11.2961	39	22.8082	64	28.3065	89	30.9325
15	11.9379	40	23.1148	65	28.4592	90	31.0024
16	12.5611	41	23.4124	66	28.5950	91	31.0703
17	13.1661	42	23.7014	67	28.7331	92	31.1362
18	13.7535	43	23.9819	68	28.8670	93	31.2002
19	14.3238	44	24.2543	69	28.9971	94	31.2623
20	14.8775	45	24.5187	70	29.1234	95	31.3227
21	15.4150	46	24.7755	71	29.2460	96	31.3812
22	15.9369	47	25.0247	72	29.3651	97	31.4381
23	16.4436	48	25.2667	73	29.4807	98	31.4933
24	16.9355	49	25.5017	74	29.5929	99	31.5469
25	17.4131	50	25.7298	75	29.7018	100	31.5989

The Value of the Perpetuity is 33.3333 Years.

A Table shewing the Value of an Annuity certain, of one Pound per Annum, from 1 to 100 Years, at the Rate of 4 per Cent. per Annum.

Years	Value in Years, D. Pts.	Years	Value in Years, D. Pts.	Years	Value in Years, D. Pts.	Years	Value in Years, D. Pts.
1	0.9615	26	15.9828	51	21.6175	76	23.7312
2	1.8861	27	15.3296	52	21.7476	77	23.7800
3	2.7751	28	15.6631	53	21.8727	78	23.8269
4	3.6299	29	15.9837	54	21.9920	79	23.8720
5	4.4518	30	17.2920	55	22.1086	80	23.9154
6	5.2421	31	17.5885	56	22.2198	81	23.9571
7	6.0021	32	17.8736	57	22.3268	82	23.9972
8	6.7327	33	18.1476	58	22.4296	83	24.0358
9	7.4353	34	18.4112	59	22.5284	84	24.0729
10	8.1109	35	18.6646	60	22.6235	85	24.1085
11	8.7605	36	18.9083	61	22.7149	86	24.1428
12	9.3851	37	19.1426	62	22.8028	87	24.1758
13	9.9856	38	19.3679	63	22.8873	88	24.2075
14	10.5631	39	19.5845	64	22.9686	89	24.2380
15	11.1184	40	19.7928	65	23.0468	90	24.2673
16	11.6523	41	19.9931	66	23.1218	91	24.2955
17	12.1657	42	20.1856	67	23.1940	92	24.3226
18	12.6593	43	20.3708	68	23.2635	93	24.3486
19	13.1339	44	20.5488	69	23.3303	94	24.3737
20	13.5903	45	20.7200	70	23.3945	95	24.3978
21	14.0292	46	20.8847	71	23.4563	96	24.4209
22	14.4511	47	21.0429	72	23.5156	97	24.4432
23	14.8568	48	21.1951	73	23.5727	98	24.4646
24	15.2470	49	21.3415	74	23.6276	99	24.4852
25	15.6221	50	21.4822	75	23.6804	100	24.5050

The Value of the Perpetuity is 25 Years Purchase.

A Table

A Table shewing the Value of an Annuity certain, of one Pound per Annum, from 1 to 100 Years, at the Rate of 5 per Cent. per Annum.

<i>Years</i>	<i>Value in Years, D. Pts.</i>	<i>Years</i>	<i>Value in Years, D. Pts.</i>	<i>Years</i>	<i>Value in Years, D. Pts.</i>	<i>Years</i>	<i>Value in Years, D. Pts.</i>
1	0.9524	26	14.3752	51	18.3390	76	19.5095
2	1.8594	27	14.6430	52	18.4181	77	19.5329
3	2.7232	28	14.8981	53	18.4934	78	19.5551
4	3.5460	29	15.1411	54	18.5651	79	19.5763
5	4.3295	30	15.3725	55	18.6335	80	19.5965
6	5.0757	31	15.5828	56	18.6985	81	19.6157
7	5.7864	32	15.8027	57	18.7605	82	19.6340
8	6.4632	33	16.0026	58	18.8195	83	19.6514
9	7.1078	34	16.1929	59	18.8758	84	19.6680
10	7.7217	35	16.3742	60	18.9293	85	19.6838
11	8.3064	36	16.5469	61	18.9803	86	19.6989
12	8.8633	37	16.7113	62	19.0288	87	19.7132
13	9.3936	38	16.8679	63	19.0751	88	19.7269
14	9.8986	39	17.0170	64	19.1191	89	19.7399
15	10.3797	40	17.1591	65	19.1611	90	19.7523
16	10.8387	41	17.2944	66	19.2010	91	19.7641
17	11.2741	42	17.4232	67	19.2391	92	19.7753
18	11.6896	43	17.5459	68	19.2753	93	19.7860
19	12.0853	44	17.6628	69	19.3098	94	19.7962
20	12.4622	45	17.7741	70	19.3427	95	19.8059
21	12.8212	46	17.8801	71	19.3740	96	19.8151
22	13.1630	47	17.9810	72	19.4038	97	19.8239
23	13.4886	48	18.0772	73	19.4322	98	19.8323
24	13.7986	49	18.1687	74	19.4592	99	19.8403
25	14.0939	50	18.2559	75	19.4850	100	19.8479

The Value of the Perpetuity is 20 Years Purchase.

A Table

A Table shewing the Value of an Annuity certain, of one Pound per Annum, from 1 to 100 Years, at the Rate of 6 per Cent. per Annum.

<i>Years</i>	<i>Value in Years, D. Pts.</i>	<i>Years</i>	<i>Value in Years, D. Pts.</i>	<i>Years</i>	<i>Value in Years, D. Pts.</i>	<i>Years</i>	<i>Value in Years, D. Pts.</i>
1	0.9434	26	13.0032	51	15.8134	76	16.4678
2	1.8334	27	13.2105	52	15.8614	77	16.4790
3	2.6730	28	13.4062	53	15.9070	78	16.4897
4	3.4651	29	13.5907	54	15.9500	79	16.4997
5	4.2124	30	13.7648	55	15.9905	80	16.5091
6	4.9173	31	13.9291	56	16.0288	81	16.5180
7	5.5824	32	14.0840	57	16.0649	82	16.5265
8	6.2098	33	14.2302	58	16.0990	83	16.5344
9	6.8017	34	14.3681	59	16.1311	84	16.5419
10	7.3601	35	14.4982	60	16.1614	85	16.5489
11	7.8868	36	14.6210	61	16.1900	86	16.5556
12	8.3838	37	14.7368	62	16.2170	87	16.5619
13	8.8527	38	14.8460	63	16.2424	88	16.5678
14	9.2950	39	14.9491	64	16.2665	89	16.5734
15	9.7122	40	15.0463	65	16.2891	90	16.5787
16	10.1059	41	15.1381	66	16.3105	91	16.5837
17	10.4773	42	15.2245	67	16.3307	92	16.5884
18	10.8276	43	15.3062	68	16.3497	93	16.5928
19	11.1581	44	15.3832	69	16.3676	94	16.5970
20	11.4699	45	15.4558	70	16.3845	95	16.6006
21	11.7641	46	15.5244	71	16.4005	96	16.6047
22	12.0416	47	15.5890	72	16.4156	97	16.6082
23	12.3034	48	15.6500	73	16.4298	98	16.6115
24	12.5504	49	15.7076	74	16.4432	99	16.6146
25	12.7834	50	15.7619	75	16.4558	100	16.6715

The Value of the Perpetuity is 16.6667 Years.

A Table

A Table shewing the Value of an Annuity certain, of one Pound per Annum, from 1 to 100 Years, at the Rate of 7 per Cent. per Annum.

Years	Value in Years, D. Pts.	Years	Value in Years, D. Pts.	Years	Value in Years, D. Pts.	Years	Value in Years, D. Pts.
1	0.9346	26	11.8258	51	13.8325	76	14.2022
2	1.8080	27	11.9867	52	13.8621	77	14.2077
3	2.6243	28	12.1371	53	13.8898	78	14.2128
4	3.3872	29	12.2777	54	13.9157	79	14.2175
5	4.1002	30	12.4090	55	13.9399	80	14.2220
6	4.7665	31	12.5318	56	13.9626	81	14.2262
7	5.3893	32	12.6466	57	13.9837	82	14.2301
8	5.9713	33	12.7538	58	14.0035	83	14.2337
9	6.5152	34	12.8540	59	14.0219	84	14.2371
10	7.0236	35	12.9477	60	14.0392	85	14.2403
11	7.4987	36	13.0352	61	14.0553	86	14.2433
12	7.9427	37	13.1170	62	14.0704	87	14.2460
13	8.3577	38	13.1935	63	14.0845	88	14.2486
14	8.7455	39	13.2649	64	14.0976	89	14.2511
15	9.1079	40	13.3317	65	14.1099	90	14.2533
16	9.4464	41	13.3941	66	14.1214	91	14.2554
17	9.7632	42	13.4525	67	14.1322	92	14.2574
18	10.0591	43	13.5070	68	14.1422	93	14.2593
19	10.3356	44	13.5579	69	14.1516	94	14.2610
20	10.5940	45	13.6055	70	14.1603	95	14.2626
21	10.8355	46	13.6580	71	14.1686	96	14.2641
22	11.0612	47	13.6916	72	14.1763	97	14.2655
23	11.2722	48	13.7305	73	14.1834	98	14.2669
24	11.4693	49	13.7668	74	14.1901	99	14.2681
25	11.6536	50	13.8007	75	14.1964	100	14.2693

The Value of the Perpetuity is 14.2857 Years.

A Table shewing the Value of an Annuity certain, of one Pound per Annum, from 1 to 100 Years, at the Rate of 8 per Cent. per Annum.

Years	Value in Years, D. Pts.	Years	Value in Years, D. Pts.	Years	Value in Years, D. Pts.	Years	Value in Years, D. Pts.
1	0.9259	26	10.8100	51	12.2532	76	12.4640
2	1.7833	27	10.9352	52	12.2715	77	12.4666
3	2.5771	28	11.0511	53	12.2884	78	12.4691
4	3.3121	29	11.1584	54	12.3041	79	12.4714
5	3.9927	30	11.2578	55	12.3186	80	12.4735
6	4.6229	31	11.3498	56	12.3321	81	12.4755
7	5.2064	32	11.4350	57	12.3445	82	12.4773
8	5.7466	33	11.5139	58	12.3560	83	12.4790
9	6.2469	34	11.6869	59	12.3667	84	12.4805
10	6.7101	35	11.6546	60	12.3766	85	12.4820
11	7.1390	36	11.7172	61	12.3857	86	12.4833
12	7.5361	37	11.7752	62	12.3942	87	12.4845
13	7.9038	38	11.8289	63	12.4020	88	12.4857
14	8.2442	39	11.8786	64	12.4093	89	12.4868
15	8.5595	40	11.9246	65	12.4160	90	12.4877
16	8.8514	41	11.9672	66	12.4222	91	12.4886
17	9.1216	42	12.0067	67	12.4280	92	12.4895
18	9.3719	43	12.0432	68	12.4333	93	12.4903
19	9.6036	44	12.0771	69	12.4382	94	12.4910
20	9.8181	45	12.1084	70	12.4428	95	12.4917
21	10.0168	46	12.1374	71	12.4471	96	12.4923
22	10.2007	47	12.1627	72	12.4510	97	12.4928
23	10.3711	48	12.1891	73	12.4546	98	12.4934
24	10.5288	49	12.2122	74	12.4580	99	12.4939
25	10.6748	50	12.2335	75	12.4611	100	12.4943

The Value of the Perpetuity is 12.5 Years.

For

For by entering the 5 *per Cent. per Annum* Table of Annuities certain, with 15.3588 Years, the Value of a Life of 10 Years of Age, at the same Rate of Interest; you will find that it is greater than 15.1411 Years, the Value of an Annuity certain, for the Term of 29 Years, and less than 15.3725 Years, the Value of an Annuity certain for the Term of 30 Years, and by making a proportionable Allowance for the Excess of 15.3588 Years, the given Annuity above 15.1411, the Value of an Annuity certain for a Term of 29 Years, you will find that the Value of a Life of 10 Years of Age, is equal to the Value of an Annuity certain, for the Term of 29.9408 Years.

The Value of an Annuity upon a Life, may be considered as relative to the Value of Money, and therefore is more or less, according to the lower or higher Values of Money, or Rates of Interest; thus the Value of a Life of 10 Years of Age, when Money is valued at 3 *per Cent. per Annum*, is worth 19.5761 Years Purchase; but when Money is valued at 4 *per Cent. per Annum*, is worth 17.2738 Years Purchase; and when Money is valued at 5 *per Cent. per Annum*, it is worth no more than 15.3588 Years Purchase; being always in a flowing State, greater as the Value of Money decreases, and less as the Value of Money increases. And in order to estimate the true Value of a Life at any Rate of Interest, I have inserted the following Table.

The Value of Lives upon Annuities certain.

<i>Ages.</i>	<i>Years Value.</i>	<i>Ages.</i>	<i>Years Value.</i>	<i>Ages.</i>	<i>Years Value.</i>	<i>Ages.</i>	<i>Years Value.</i>
1	20.8031	24	21.1984	47	14.2064	70	7.8613
2	25.4039	25	20.7482	48	13.9138	71	7.5932
3	28.5901	26	20.3684	49	13.6317	72	7.3533
4	30.1599	27	19.9842	50	13.3574	73	7.1516
5	30.6300	28	19.6063	51	13.0808	74	7.0066
6	30.8037	29	19.2116	52	12.8201	75	6.7374
7	30.7646	30	18.8923	53	12.5732	76	6.5016
8	30.6142	31	18.5563	54	12.3397	77	6.0893
9	30.3420	32	18.2364	55	12.0150	78	5.6924
10	29.9409	33	17.9157	56	11.7081	79	5.2968
11	29.3152	34	17.6007	57	11.4068	80	4.9103
12	28.7015	35	17.2824	58	11.1128	81	4.5437
13	28.0374	36	16.9622	59	10.8356	82	4.1966
14	27.3676	37	16.6505	60	10.5774	83	3.8372
15	26.6531	38	16.3363	61	10.3349	84	3.6408
16	25.8395	39	16.0204	62	9.9932	85	3.4929
17	25.0283	40	15.7941	63	9.6677	86	3.1201
18	24.3063	41	15.5632	64	9.3490	87	2.7931
19	23.6599	42	15.3755	65	9.0395	88	2.5310
20	23.0853	43	15.2019	66	8.7524	89	2.2452
21	22.5901	44	14.9586	67	8.4841	90	1.9616
22	22.0801	45	14.7308	68	8.2393		
23	22.6480	46	14.5464	69	8.0258		

By

By the Help of this Table, and the Tables shewing the Value of Annuities certain, at the Rate of 3, 4, &c. *per Cent. per Annum*, may the Value of any single Life, from 1 to 90 Years of Age, at any Rate of Interest, be readily found.

E X A M P L E.

Suppose it were required to find the Value of a Life of 30 Years of Age, Money being valued at 6 *per Cent. per Annum*.

Entering the preceding Table, with the given Age 30 in the Column of *Ages*, I find in the next Column intituled *Years Value*, that a Life of 30 Years of Age, is equal to an Annuity certain for the Term of 18.8933 Years; now entering the Tables intituled *The Value of Annuities certain at the Rate of 6 per Cent. per Annum*, I find that an Annuity certain for a Term of 18 Years, is worth 10.8276 Years Purchase; and that an Annuity certain for a Term of 19 Years, is worth 11.1581 Years Purchase; and by making a proportionable Allowance for .8923, the Excess of the Value of the Life of 30 Years of Age, above 10.8276 Years, the Value of an Annuity certain for a Term of 18 Years exactly, we shall have .2949, which added to 10.8276, the Sum is 11.1225, which shews that a Life of 30 Years of Age, is worth 11.1225 Years Purchase, at the Rate of 6 *per Cent. per Annum*; and after the same Manner, may the Value of any other Life, at any given Rate of Interest, be found.

In the Case of single Lives, though it rarely happens that a single Life expires at the exact Period of Time, when the whole Purchase-Money, with compound Interest thereon, is received; yet it is manifest, that in a large Number of Lives, if some die sooner than the Period of Time, others survive it, till at last the Ballance becomes nearly the same.

For Example; It appears by the Table in Page the 5th, deduced from the Bills of Mortality, that out of 1000 Persons supposed to be born at the same Time, in *London*, that in a Mean, not one of them survived the 95th Year; it therefore follows, that the Value of an Annuity upon the joint Lives of 1000 Persons born at the same Time in *London*, to continue during the Life of the longest Liver of them, that is, so long as any one of them is in being, is the same with the Value of an Annuity certain for the Term of 94 Years, since it is by Observation found, the most likely Chance for both to end at the same Period of Time, and consequently are therefore to be estimated of the same Value.

It appears by the same Table, that out of 490 Persons living at the Age of 10 Years, not one survives the 95th Year; consequently, the Value of the joint Lives of 490 Persons of 10 Years of Age, to continue during the Life of the Survivor, or so long as any one of them is in being, is equal in Value to an Annuity certain for the Term of 84 Years, since, as before, both will expire at the same Time.

Again; it appears, that out of 459 Persons living at the Age of 20 Years, not one arrives to the Age of 95; consequently, the Value of an Annnity granted
for

for the joint Lives of 459 Persons living, at the Age of 20 Years, and to continue during the Life of the Survivor, is equal in Value, to an Annuity certain for a Term of 74 Years.

It appears, that out of 385 Persons living at the Age of 30, not one survived the 95th Year; it follows, that the Value of 385 joint Lives, at the Age of 30, and to continue during the Life of the Survivor, is equal in Value to an Annuity certain for a Term of 64 Years.

It appears, that out of 294 Persons living at the Age of 40 Years, not one survives the 95th Year; it follows, that the Value of 294 joint Lives, at the Age of 40, and to continue during the Life of the Survivor, is equal in Value to an Annuity certain for the Term of 54 Years.

It appears, that out of 204 Persons living at the Age of 50 Years, not one survives the 95th Year; it follows, that the Value of the joint Lives of 204 Persons, at the Age of 50, and to continue during the Life of the Survivor, is of the same Value, with an Annuity certain for a Term of 44 Years.

It appears, that out of 130 Persons living at the Age of 60 Years, not one survives the 95th Year; it follows, that the Value of the joint Lives of 130 Persons at the Age of 60, and to continue during the Life of the Survivor, is equal in Value to an Annuity certain for a Term of 34 Years.

It appears, that out of 69 Persons living at the Age of 70, not one arrives to the 95th Year; consequently, the Value of an Annuity for the joint Lives of 69 Persons living, at the Age of 70 Years, and to continue during the

the Life of the Survivor, is equal in Value to an Annuity certain for a Term of 24 Years.

It appears, that out of 29 Persons living at the Age of 80 Years, not one arrives to the Age of 95; it follows, that the Value of the joint Lives of 29 Persons living, at the Age of 80 Years, and to continue during the Life of the Survivor, is of the same Value, with an Annuity certain for a Term of 14 Years.

It appears, that out of 5 Persons living at the Age of 90 Years, not one lives to the 95th Year; it follows, that the Value of the joint Lives of 5 Persons at the Age of 90, and to continue during the Life of the Survivor, is of the same Value with an Annuity certain for a Term of 4 Years.

It appears, that out of 1000 Children born at the same Time, but 8 are living at 80 Years of Age; it consequently follows, that the Value of the joint Lives of 1000 Children born at the same Time, and to continue during the Life of the Survivor, is of the same Value with an Annuity certain for a Term of 87 Years: And inasmuch as out of the 1000 Children born at the same Time, but 99 live to the 65th Year of their Age; it follows, that the Value of the joint Lives of 10 Children born at the same Time, and to continue during the Life of the Survivor, is of the same Value with an Annuity certain for a Term of 64 Years.

It appears, that out of 501 Children of 8 Years Age, but 10 live to 87 Years old; it follows, that the Value of an Annuity, for the joint Lives of 50 Children of 8 Years of Age, and to continue during the Life of the Survivor,

Survivor, is of the same Value with an Annuity certain for a Term of 79 Years: And, inasmuch as there are but 99 living at the Age of 65 Years; it follows, that the Value of an Annuity, for the joint Lives of 5 Children at 8 Years old, and to continue during the Life of the Survivor, is of the same Value with an Annuity certain for a Term of 57 Years.

It appears, that out of 490 Persons of the Age of 10 Years, but 10 are living at the Age of 87 Years; it follows, that the Value of the joint Lives of 49 Persons living at the Age of 10 Years, and to continue during the Life of the Survivor, is of the same Value with an Annuity certain for a Term of 77 Years; and, inasmuch as but 99 out of that Number are living at the Age of 65 Years; it follows, that the Value of an Annuity granted upon the joint Lives of 5 Persons of the Age of 10 Years, and to continue during the Life of the Survivor, is of the same Value with an Annuity certain for a Term of 54 Years.

It appears, that out of 459 Persons living at the Age of 20 Years, but 10 remained at the End of 87 Years; it follows, that the Value of an Annuity granted upon the joint Lives of 46 Persons living at the Age of 20 Years, and to continue during the Life of the Survivor, is equal in Value to an Annuity certain for a Term of 67 Years.

It appears, that out of 501 Persons living at the Age of 8 Years, but 10 are living at the Age of 87 Years; it follows, that the Value of an Annuity granted upon the joint Lives of 40 Persons of 28 Years old, and to

continue during the Life of the Survivor, is of the same Value with an Annuity certain for a Term of 59 Years: And, inasmuch as but 99 are living at the Age of 65 Years; it follows, that the Value of an Annuity granted upon the joint Lives of 4 Persons living at the Age of 28 Years, and to continue during the Life of the Survivor, is of the same Value with an Annuity certain for a Term of 36 Years.

It appears, that out of 304 Persons living at the Age of 39 Years, but 10 are remaining at the End of the 87th Year; it follows, that the Value of an Annuity, granted upon the joint Lives of 30 Persons living at the Age of 39 Years, and to continue during the Life of the Survivor, is of the same Value with an Annuity certain for a Term of 48 Years: And inasmuch as there are but 99 remaining at the End of the 64th Year; it follows, that the Value of an Annuity granted upon 3 joint Lives, of the Age of 39 Years, and to continue during the Life of the Survivor, is of the same Value with an Annuity for a Term of 25 Years.

Again; it appears, that out of 204 Persons living at the Age of 50 Years, but 10 remained at the End of the 87th Year; it follows, that the Value of an Annuity, granted upon the joint Lives of 20 Persons living at the Age of 50 Years, and to continue during the Life of the Survivor, is of the same Value with an Annuity certain for a Term of 37 Years: And inasmuch as but 99 remained at the End of the 65th Year; it follows, that

of Annuities upon Lives.

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that the Value of an Annuity granted for the joint Lives of 2 Persons at the Age of 50 Years, and to continue during the Life of the Survivor, is of the same Value with an Annuity certain for a Term of 14 Years; and after the same Manner, may the Value of an Annuity, to be granted upon any Number of joint Lives of the same Age, within the Limits of the Tables, and to continue during the Life of the Survivor, be readily found.

14	1000	1000	1000	1000	1000
15	980	980	980	980	980
16	960	960	960	960	960
17	940	940	940	940	940
18	920	920	920	920	920
19	900	900	900	900	900
20	880	880	880	880	880
21	860	860	860	860	860
22	840	840	840	840	840
23	820	820	820	820	820
24	800	800	800	800	800
25	780	780	780	780	780
26	760	760	760	760	760
27	740	740	740	740	740
28	720	720	720	720	720
29	700	700	700	700	700
30	680	680	680	680	680
31	660	660	660	660	660
32	640	640	640	640	640
33	620	620	620	620	620
34	600	600	600	600	600
35	580	580	580	580	580
36	560	560	560	560	560
37	540	540	540	540	540
38	520	520	520	520	520
39	500	500	500	500	500
40	480	480	480	480	480
41	460	460	460	460	460
42	440	440	440	440	440
43	420	420	420	420	420
44	400	400	400	400	400
45	380	380	380	380	380
46	360	360	360	360	360
47	340	340	340	340	340
48	320	320	320	320	320
49	300	300	300	300	300
50	280	280	280	280	280
51	260	260	260	260	260
52	240	240	240	240	240
53	220	220	220	220	220
54	200	200	200	200	200
55	180	180	180	180	180
56	160	160	160	160	160
57	140	140	140	140	140
58	120	120	120	120	120
59	100	100	100	100	100
60	80	80	80	80	80
61	60	60	60	60	60
62	40	40	40	40	40
63	20	20	20	20	20
64	10	10	10	10	10
65	5	5	5	5	5
66	2	2	2	2	2
67	1	1	1	1	1
68	0	0	0	0	0
69	0	0	0	0	0
70	0	0	0	0	0
71	0	0	0	0	0
72	0	0	0	0	0
73	0	0	0	0	0
74	0	0	0	0	0
75	0	0	0	0	0
76	0	0	0	0	0
77	0	0	0	0	0
78	0	0	0	0	0
79	0	0	0	0	0
80	0	0	0	0	0
81	0	0	0	0	0
82	0	0	0	0	0
83	0	0	0	0	0
84	0	0	0	0	0
85	0	0	0	0	0
86	0	0	0	0	0
87	0	0	0	0	0
88	0	0	0	0	0
89	0	0	0	0	0
90	0	0	0	0	0
91	0	0	0	0	0
92	0	0	0	0	0
93	0	0	0	0	0
94	0	0	0	0	0
95	0	0	0	0	0
96	0	0	0	0	0
97	0	0	0	0	0
98	0	0	0	0	0
99	0	0	0	0	0
100	0	0	0	0	0



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48 The VALUATION, &c.

An Account of the Number of Persons that have died, &c.

Ages of the Persons dying in	1728	1729	1730	1731	1732
Under 2 Years of Age	9851	10735	10368	9907	9502
Between 2 and 5	2407	2516	2448	2096	1517
5 and 10	1038	1056	1092	932	716
10 and 20	950	999	901	806	611
20 and 30	2254	2371	2048	1916	1627
30 and 40	2490	2784	2471	2351	2175
40 and 50	2624	2698	2373	2261	2121
50 and 60	2123	2338	1713	1839	1741
60 and 70	1863	1938	1577	1500	1581
70 and 80	1290	1375	1001	913	974
80 and 90	785	769	622	628	660
90 and 100	125	137	138	108	121
100 and upwards	10	6	9	5	12
Totals	27810	29722	26761	25262	23358

Ages of the Persons dying in	1733	1734	1735	1736	1737
Under 2 Years of Age	11738	10752	9672	10580	10054
Between 2 and 5	2409	2830	1963	2706	2613
5 and 10	957	1228	755	993	1008
10 and 20	754	829	691	816	885
20 and 30	1857	1718	1605	2139	2241
30 and 40	2564	2212	2158	2445	2652
40 and 50	2685	2154	2138	2357	2578
50 and 60	2196	1668	1684	2121	2270
60 and 70	1871	1324	1339	1666	1650
70 and 80	1188	793	872	1114	1164
80 and 90	804	484	565	557	576
90 and 100	198	66	84	83	127
100 and upwards	12	4	12	4	5
Totals	29233	26062	23538	27581	27823



F I N I S.

